Patent No. 6,180,049 to Jang et al. (hereinafter "Jang"); claims 1-7, 13, 14, 16-20, 23 and 25 under 35 U.S.C. §103(a) over U.S. Patent No. 6,145,981 to Akihara et al. (hereinafter "Akihara 981"); claims 1-7, 13, 14 and 16-18 under 35 U.S.C. §103(a) over EPO Patent Publication EP 0 932 845 A2 to Akihara et al. (hereinafter "Akira 745") in view of Jang; and claims 19, 20, 23 and 25 under 35 U.S.C. §103(a) over Akihara 745 in view of Jang and further in view of Akihara 981. These rejections are respectfully traversed.

The Office Action asserts that Marumoto discloses a color filter manufacturing apparatus (90) for a head unit (55) detachably mounted on a support (90a). In particular, the Office Action asserts that Marumoto teaches a stage control unit (71) for controlling operation of the stage (52) in the X, Y and theta directions. The Office Action goes on to assert that Marumoto also teaches the head unit (55) having three color sets, each with three staggered heads (col. 5, lines 38-46, col. 12, lines 15-31 and Figs. 2 and 16 of Marumoto).

Marumoto does not teach or suggest the rotation about a first, second and third orthogonal axes, with the third axis parallel to the scanning direction, as recited in the Applicants' claimed features.

The Office Action asserts that Jang discloses that it is known to control and move the deposition subsystem (which can be an inkjet head - see col. 15, lines 37-54) over the substrate by the use of first, second and third motor devices (col. 9, lines 17-44) instead of using movement tables. The Office Action goes on to assert that Jang discloses linear motion devices as a preferred motor system, but also discloses rotational motors such as servo motors as alternatives.

Jang merely mentions linear motion in orthogonal directions, with no teaching or suggestion of rotational motion along orthogonal axes, and moreover fails to provide any details to explain how, where and when such actuators might be employed. The generalized illusion to a technical solution in Jang does not enable, in any manner apart from

impermissible hindsight, the artesian of ordinary skill to adopt the claim features of "first, second and third motors that rotate about first, second and third orthogonal axes, respectfully, the third axis being parallel to a scanning direction" towards any application related to controlling a print head. The Office Action asserts that Akihara 981 discloses an apparatus for discharging a material to an object, comprising an inkjet head that contains a plurality of heads each having a nozzle row (Figs. 19-25, item 305 and Fig. 22), the nozzle row having an arrangement of a plurality of nozzles (Fig. 22, items B1-B7, G1-G7 and R1-R7); a supporting mechanism (Fig. 21, items 325-327) that supports (and moves) the plurality of heads; a mechanism that scans at least one of the objects in the supporting mechanism relative to each other in a scanning direction (see cols. 15-18, Fig. 22 arrow S), wherein the nozzle row is inclined relative to the scanning direction (Fig. 22). Akihara 981 does not disclose, as the Office Action acknowledges, that a control device that moves the inkjet head, the control device including first, second and third motors that rotate about the first, second and third orthogonal axes, respectively, the third axis being parallel to the scanning direction. The Office Action relies on Jang to overcome the shortfall of Akihara 981. Based on the discussion above, Jang does not enable, in any manner apart from impermissible hindsight, the artesian of ordinary skill to adopt the claimed features of first, second and third motors that rotate above first, second and third orthogonal axes, respectively, the third axes being parallel to a scanning direction towards any application related to controlling a print head.

The Office Action further asserts that Akihara 745 discloses an apparatus for producing a color filter, comprising: a plurality of heads each having a nozzle row (Fig. 1, 16 and 17), the nozzle row including an arrangement of a plurality of nozzles (Fig. 17, item 205); a mechanism that supplies the filter material to the heads (Fig. 3); a supporting mechanism that supports the plurality of the heads (items 214 and 90a), a nozzle row angle control mechanism that controls the inclination angles of the plurality of the nozzle rows (items 214,

212a-c, and 206a-c); and a nozzle row spacing control mechanism that controls a spacing between the plurality of the nozzle rows (via the slide mechanisms, cols. 17-18).

Akihara 745 does not disclose a control device that moves an inkjet head, the control device including first, second and third motors that rotate about first, second and third orthogonal axes, respectively, the inkjet head containing the plurality of heads, the third axes being parallel to the scanning direction.

Based on the arguments presented above, the Applicants believe that independent claims 1, 5, 16, 19, 23 and 25 are in condition for allowance. Additionally, dependent claims 2-4, 6-7, 13-14, 17-18, and 20 depend, either directly or indirectly, on the independent claims. Therefore, both the independent and dependent claims are in condition for allowance. Applicants respectfully request that the Examiner reconsider and withdraw the rejections.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-7, 13, 14, 16-20, 23 and 25 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

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